

ASTRA EQUITY STRATEGIES

Key Stock Selection Concepts

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Quartz Partners' Astra Strategies employ a concept we refer to as "Economic Margin" to identify value-creating firms through identifying and understanding the key drivers of corporate performance and market valuations. Economic Margin measures the true return a company earns relative to its actual cost of capital.

When evaluating corporate performance, three key aspects are initially considered: The cash flow the firm is generating; the capital base employed to produce the cash flow; and the opportunity cost of employing the relevant capital. Positive Economic Margin firms create investor wealth by generating cash flow greater than their cost of their capital.

Through connecting firm cash generation to the assets used to produce cash flow, Economic Margin links the balance sheet to the income statement. Accounting measures such as income or earnings fail to make this connection and therefore offer only incomplete data on corporate performance.

COMMON ACCOUNTING METHODOLOGY LIMITATIONS

Corporate earnings generally represent only about half of a company's cash flow, and earnings do not reflect risk.

Accounting ratios mix and generally confuse different value drivers. Return on assets and return on equity don't reflect wealth creation or destruction. In addition, different asset lifespans, asset mix, asset age, and capital structures distort various accounting ratios across firms.

Accounting rules misrepresent many aspects of economic reality. Long-term investments such as research and development costs are immediately expensed under GAAP accounting, and operating leases which are

ECONOMIC MARGIN	=	OPERATING CASH FLOW - CAPITAL CHARGE		INVESTED CAPITAL
		OPERATING CASH FLOW	CAPITAL CHARGE	
		+ Net Income	Return ON and Return OF	
		+ Depreciation & Amortization	Capital that captures	
		+ After Tax Interest Expense	company-specific economic	
		+ Rental Expense Net Int. Adj.	circumstances	
		+ R&D Expense		
		+/- Non-Recurring Items		
ECONOMIC MARGIN	=	INFLATION-ADJUSTED INVESTED CAPITAL		
		+ Total Assets		
		+ Accumulated Depreciation		
		+ Gross Plant Inflation Adjustment		
		+ Capitalized Operating Rentals		
		+ Capitalized R&D		

This calculation seeks to identify value creating firms through analyzing and understanding the key drivers of corporate performance and market valuations.

obligations very similar to debt are not reflected on company balance sheets.

COMPARISON TO OTHER MODELS

Traditional Discounted Cash Flow Models do not indicate whether cash-flow during a particular period provides an adequate risk-adjusted return to its investors. The basic business school model provides reasonable project assessments, but is weak for enterprises and offers little transparency for investors.

Residual Income Model (EVA) is flawed because the age of the assets changes while project dynamics do not. Although EVA projects net present value profitability on a period-by-period basis, economic value changes over the life of the project.

Economic Margin framework enhances the value of EVA as the basis for valuation by

providing the same project economic profit regardless of the age of the asset. This provides a more transparent and accurate valuation.

ADDITIONAL MEASURE: Management Quality

Management quality is assessed according to firms' ability to appropriately grow or shrink the enterprise according to its economic margin. Firms with positive economic margin should grow the business while companies with negative economic margin should increase profitability. Firms creating wealth and profitably adding assets earn the highest management score. Companies not creating wealth and divesting unprofitable assets earn a medium score as these firms are divesting unprofitable assets. Low scores are given to firms that are profitable but shrinking because they should be growing, not contracting. Firms with negative

economic margins that are adding unprofitable assets receive the lowest management scores since management is destroying wealth.

ECONOMIC MARGIN APPLICATION

Over time, we believe excess returns are eliminated through competition. Firms generating excess profit attract competition which generally results in declining profits for the most profitable firms and increasing profits for the least profitable firms.

We perform a four-factor regression on historic economic margin levels to determine how attractive the company's line of business is to competition. The four factors consist of profitability, variability, trend, and invested capital. Companies with high historical economic margins attract competition resulting in more rapidly decaying economic margins. Companies with volatile historical economic margin levels usually lose their competitive advantage faster. If a company's economic margin trends upward, the competitive advantage period is extended while companies trending downward are assigned shorter periods.

The terminal discounted cash flow value is determined by decaying the economic margin to zero over a period based on the individual characteristics and competitive advantages of that firm. Larger, more established firms are assumed to have more durable profits giving them somewhat greater competitive advantage.

Historically, the economic margins of top decile firms decline dramatically over time while the bottom decile firms move in the opposite direction. Simply, most growth stocks can't maintain their economic margin, while struggling companies eventually

improve. Using this framework helps avoid overpaying for growth companies and also identifies companies whose stock prices may have fallen too far because of temporary issues.

Using the Economic Margin multi-factor framework, we create a letter grade (A-F) for each company and an investment grade (A-F) which more heavily weights current market conditions.

DETERMINING TARGET PRICE

A discounted cash flow analysis is applied to a firm's projected economic margin to create an estimated enterprise value from which total debt is subtracted to arrive at total equity value. Once the target price is determined, we calculate the percent-to-target based on the difference between the current price and our calculated target price.

BUY AND SELL DISCIPLINE

Potential stock purchases are identified through screening for high company grade, high investment grade, attractive target price, passing management quality, good earnings quality, and attractive momentum criteria. After comprehensive screening is completed, final selection is made from the small number of potential purchases identified by sector according to additional subjective measures that seek to identify best opportunity while enhancing portfolio diversification.

All buy signals and holdings are reviewed weekly. Any firm whose company grade or investment grade falls below an "A", or whose target price appreciation percentage declines into single digits is reviewed for replacement. Declines of a company grade or investment grade to a "C" or lower, or a target price below current price nor-

mally results in an automatic sale and replacement, although some market conditions can make replacement very difficult or even impossible.

During times of anticipated or actual extreme economic or market duress, we also add additional measures of company solvency and financial strength in an effort to screen out companies that may perform poorly or possibly not survive during turbulent and unpredictable conditions.

The combination of algorithmic measures and comprehensive processes based on fundamental analysis provides a disciplined approach which we believe offers not only significant value to the stock management process, but also provides consistency and predictability over various market conditions.

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